



Year One DT Medium Term Plan

Research	Design	Make	Evaluate
<p>Research similar existing products and use knowledge of these existing products to produce ideas.</p>	<p>Understanding contexts, users and purposes</p> <ul style="list-style-type: none"> • Work confidently within a range of contexts, such as imaginary, story-based, home, school, gardens, playgrounds, local community, industry and the wider environment • State what products they are designing and making • Say whether their products are for themselves or other users • Describe what their products are for • Say how their products will work and how they will make their products suitable for their intended users. • Use simple design criteria to help develop their ideas <p>Generating, developing, modelling and communicating ideas</p> <p>generate ideas by drawing on their own experiences</p> <ul style="list-style-type: none"> • use knowledge of existing products to help come up with ideas • develop and communicate ideas by talking and drawing • model ideas by exploring materials, components and construction kits and by making templates and mock-ups • use information and communication technology, where appropriate, to develop and communicate their ideas 	<p>Planning</p> <p>Plan by suggesting what to do next</p> <ul style="list-style-type: none"> • select from a range of tools and equipment, explaining their choices • select from a range of materials and components according to their characteristic <p>Practical skills and techniques</p> <ul style="list-style-type: none"> • follow procedures for safety and hygiene • use a range of materials and components, including construction materials and kits, textiles, food ingredients and mechanical components • measure, mark out, cut and shape materials and components • assemble, join and combine materials and components • use finishing techniques, including those from art and design. 	<p>Own ideas and products</p> <ul style="list-style-type: none"> • Talk about their design ideas and what they are making • make simple judgements about their products and ideas against design criteria • suggest how their products could be improved. <p>Existing products</p> <p>what products are</p> <ul style="list-style-type: none"> • who products are for • what products are for • how products work • how products are used • where products might be used • what materials products are made from • what they like and dislike about products
Language			
Market research, surveys, questionnaires	design, product, materials, ideas, template, mock up, develop	make, build, combine, join, shape, tools	change, improve, prefer, useful, unsuccessful, future, progress, modify, alter, adapt, original, finished article, evaluate
Project: New Chair for Baby Bear	Project 1: Which part of your picture should move? (Stem.org) Project 2: Wheels and axis	Project: Puppets	Project 1: How do you like your toast? (stem.org) Project 2: Fruit Kebabs
Structure	Mechanisms	Textiles	Cooking and Nutrition
<ul style="list-style-type: none"> • Build structures, exploring how they can be made stronger, stiffer and more stable. • Begin to measure and join materials, with some support. • Describe differences in materials suggest ways to make material/product stronger. 	<ul style="list-style-type: none"> • Begin to use levers or slides. 	<ul style="list-style-type: none"> • measure, cut and join textiles to make a product, with some support. • choose suitable textiles. 	<ul style="list-style-type: none"> • Know how to peel, cut, grate, mix and mould foods (with close supervision). • Sort foods into the 5 groups using The Eatwell Plate. • Describe textures • Wash hands & clean surfaces • Think of interesting ways to decorate food • Say where some foods come from, (i.e. plant or animal) • Describe differences between some food groups (i.e. sweet, vegetable etc.) • Discuss how fruit and vegetables are healthy • Cut, peel and grate safely, with support
Language			
Cut, fold, join, fix, weak, strong	slider, lever, pivot, slot, bridge/guide, card, masking tape, paper fastener, join, pull, push, up, down, straight, curve, forwards, backwards	Mark out, cut, join, finish techniques, tools	fruit and vegetable names, names of equipment and utensils sensory vocabulary e.g. soft, juicy, crunchy, sweet, sticky, smooth, sharp, crisp, sour, hard flesh, skin, seed, pip, core, slicing, peeling, cutting, squeezing, healthy diet, choosing, ingredients.



Year Two DT Medium Term Plan

Year Two DT Medium Term Plan			
Research	Design	Make	Evaluate
<p>Research similar existing products and use knowledge of these existing products to produce ideas.</p>	<p>Understanding contexts, users and purposes</p> <ul style="list-style-type: none"> • Work confidently within a range of contexts, such as imaginary, story-based, home, school, gardens, playgrounds, local community, industry and the wider environment • State what products they are designing and making • Say whether their products are for themselves or other users • Describe what their products are for • Say how their products will work and how they will make their products suitable for their intended users. • Use simple design criteria to help develop their ideas <p>Generating, developing, modelling and communicating ideas</p> <p>generate ideas by drawing on their own experiences</p> <ul style="list-style-type: none"> • use knowledge of existing products to help come up with ideas • develop and communicate ideas by talking and drawing • model ideas by exploring materials, components and construction kits and by making templates and mock-ups • use information and communication technology, where appropriate, to develop and communicate their ideas 	<p>Planning</p> <p>Plan by suggesting what to do next</p> <ul style="list-style-type: none"> • select from a range of tools and equipment, explaining their choices • select from a range of materials and components according to their characteristic <p>Practical skills and techniques</p> <ul style="list-style-type: none"> • follow procedures for safety and hygiene • use a range of materials and components, including construction materials and kits, textiles, food ingredients and mechanical components • measure, mark out, cut and shape materials and components • assemble, join and combine materials and components • use finishing techniques, including those from art and design. 	<p>Own ideas and products</p> <ul style="list-style-type: none"> • Talk about their design ideas and what they are making • make simple judgements about their products and ideas against design criteria • suggest how their products could be improved. <p>Existing products</p> <p>what products are</p> <ul style="list-style-type: none"> • who products are for • what products are for • how products work • how products are used • where products might be used • what materials products are made from • what they like and dislike about products
Language			
Market research, surveys, questionnaires	design, product, materials, ideas, template, mock up, develop	make, build, combine, join, shape, tools	change, improve, prefer, useful, unsuccessful, future, progress, modify, alter, adapt, original, finished article, evaluate
Project: New Chair for Baby Bear	Project 1: Which part of your picture should move? (Stem.org) Project 2: Wheels and axis	Project: Puppets	Project 1: How do you like your toast? (stem.org) Project 2: Fruit Kebabs
Structure	Mechanisms	Textiles	Cooking and Nutrition
<ul style="list-style-type: none"> • Build structures, exploring how they can be made stronger, stiffer and more stable. • Begin to measure and join materials, with some support. • Describe differences in materials suggest ways to make material/product stronger. 	<ul style="list-style-type: none"> • Use levers or slides. • Begin to understand how to use wheels and axles. 	<ul style="list-style-type: none"> • Measure textiles • Join textiles together to make a product and explain how I did it. • Carefully cut textiles to produce accurate pieces. • Explain choices of textile. • Understand that a 3D textile structure can be made from two identical fabric shapes. 	<ul style="list-style-type: none"> • Explain hygiene and keep a hygienic kitchen. • Describe properties of ingredients and importance of varied diet. • Say where food comes from (animal, underground etc.) • Describe how food is farmed, home-grown, caught. • Draw eat well plate; explain there are groups of food. • Describe “five a day” • Cut, peel and grate with increasing confidence.
Language			
Cut, fold, join, fix structure, wall, tower, framework, weak, strong, base, top, underneath, side, edge, surface, thinner, thicker, corner, point, straight, curved, metal, wood, plastic circle, triangle, square, rectangle, cuboid, cube cylinder.	Vehicle, wheel, axle, axle holder, chassis, body, cab assembling, cutting, joining, shaping, finishing, fixed, free, moving, mechanism names of tools, equipment and materials used.	Joining and finishing techniques, tools, fabrics and components, template, pattern pieces, mark out, join, decorate,	Fruit and vegetable names, names of equipment and utensils sensory vocabulary e.g. soft, juicy, crunchy, sweet, sticky, smooth, sharp, crisp, sour, hard flesh, skin, seed, pip, core, slicing, peeling, cutting, squeezing, healthy diet, choosing, ingredients, healthy, unhealthy, source, Fruit, vegetables, clean safe, dirty, unsafe, amount, ingredients, recipe, weight, nutrients vegetarian, dietary requirements



Year Three Medium Term Plan

Research

- Begin to research others' needs
- show design meets a range of requirements
 - describe purpose of product
 - follow a given design criteria
 - have at least one idea about how to create product

Design

- Understanding contexts, users and purposes**
- work confidently within a range of contexts, such as the home, school, leisure, culture, enterprise, industry and the wider environment
 - describe the purpose of their products
 - indicate the design features of their products that will appeal to intended users
 - explain how particular parts of their products work
- Generating, developing, modelling and communicating ideas**
- gather information about the needs and wants of particular individuals and groups
 - develop their own design criteria and use these to inform their ideas
 - generate realistic ideas, focusing on the needs of the user
 - *make design decisions that take account of the availability of resources*

Make

- Planning**
- select tools and equipment suitable for the task
- *explain their choice of tools and equipment in relation to the skills and techniques they will be using*
 - select materials and components suitable for the task
 - explain their choice of materials and components according to functional order *the main stages of making*
- Practical skills and techniques**
- follow procedures for safety and hygiene
 - use a wider range of materials and components than KS1, including construction materials and kits, textiles, food ingredients, mechanical components and electrical components
 - measure, mark out, cut and shape materials and components with some accuracy
 - assemble, join and combine materials and components with some accuracy
 - apply a range of finishing techniques, including those from art and design, with some accuracy

Evaluate

- Own ideas and products**
- identify the strengths and areas for development in their ideas and products
 - consider the views of others, including intended users, to improve their work
 - refer to their design criteria as they design and make
 - use their design criteria to evaluate their completed products
- Existing products**
- how well products have been designed
 - how well products have been made
 - why materials have been chosen
 - what methods of construction have been used
 - how well products work
 - how well products achieve their purposes
 - how well products meet user needs and wants
 - pupils should also investigate and analyse:
 - who designed and made the products
 - where products were designed and made
 - when products were designed and made
 - whether products can be recycled or reused

Language

develop, design criteria, discussion

Think, design, sketch, label, product,

Ideas, tools, materials, plan, equipment, accuracy, mechanical, electrical different techniques

Design brief, Product, analyse, compare, pros and cons, improvement

Project: Packaging – shell structure (project on a page)

Project: pneumatic systems alternative project levers and linkages (project on a page)

Project: Design and make a cushion or purse.

**Project 1: War time recipes
Project 2: Honey oatcakes**

Project: Christmas cards with light circuit

Materials/Structures

- Use appropriate materials
- Work accurately to make cuts and holes.
- Join materials.
- Begin to make strong structures

Mechanisms

- Select appropriate tools / techniques.
- Alter product after checking, to make it better.
- Begin to try new/different ideas.
- Use simple lever and linkages to create movement

Textiles

- Join different textiles in different ways.
- Choose textiles considering appearance and functionality.
- Begin to understand that a simple fabric shape can be used to make a 3D textiles project.

Food and Nutrition

- Carefully select ingredients.
- Use equipment safely
- Make product look attractive.
- Think about how to grow plants to use in cooking.
- Begin to understand food comes from UK and wider world.
- Describe how healthy diet= variety/balance of food/drinks
- explain how food and drink are needed for active/healthy bodies.
- prepare and cook some dishes safely and hygienically
- grow in confidence using some of the following techniques: peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.

Electrical Systems

- Use simple circuit in product.
- Learn about how to program a computer to control product.

Language

Shell structure, three-dimensional (3-D) shape, net, cube, cuboid, prism, vertex, edge, face, length, width, breadth, capacity, marking out, scoring, shaping, tabs, adhesives, joining, assemble, accuracy, material, stiff, strong, reduce, reuse, recycle, corrugating, ribbing, laminating, font, lettering, text, graphics, decision.

Mechanism, lever, linkage, pivot, slot, bridge, guide system, input, process, output linear, rotary, oscillating, reciprocating.

Fabric, names of fabrics, fastening, compartment, zip, button, structure, finishing technique, strength, weakness, stiffening, templates, stitch, seam, seam allowance.

Name of products, names of equipment, utensils, techniques and ingredients texture, taste, sweet, sour, hot, spicy, appearance, smell, preference, greasy, moist, cook, fresh, savoury, hygienic, edible, grown, reared, caught, frozen, tinned, processed, seasonal, harvested healthy/varied diet.

Series circuit, fault, connection, toggle switch, push-to-make switch, push-to-break switch, battery, battery holder, bulb, bulb holder, wire, insulator, conductor, crocodile clip, control, program, system, input device, output device.



Year Four Medium Term Plan

Research	Design	Make	Evaluate
<ul style="list-style-type: none"> Use research for design ideas show design meets a range of requirements and is fit for purpose begin to create own design criteria have at least one idea about how to create product and suggest improvements for design. 	<p>Understanding contexts, users and purposes</p> <ul style="list-style-type: none"> work confidently within a range of contexts, such as the home, school, leisure, culture, enterprise, industry and the wider environment describe the purpose of their products indicate the design features of their products that will appeal to intended users explain how particular parts of their products work <p>Generating, developing, modelling and communicating ideas</p> <ul style="list-style-type: none"> gather information about the needs and wants of particular individuals and groups develop their own design criteria and use these to inform their ideas generate realistic ideas, focusing on the needs of the user make design decisions that take account of the availability of resources 	<p>Planning</p> <p>select tools and equipment suitable for the task</p> <ul style="list-style-type: none"> explain their choice of tools and equipment in relation to the skills and techniques they will be using select materials and components suitable for the task explain their choice of materials and components according to functional order the main stages of making <p>Practical skills and techniques</p> <ul style="list-style-type: none"> follow procedures for safety and hygiene use a wider range of materials and components than KS1, including construction materials and kits, textiles, food ingredients, mechanical components and electrical components measure, mark out, cut and shape materials and components with some accuracy assemble, join and combine materials and components with some accuracy apply a range of finishing techniques, including those from art and design, with some accuracy 	<p>Own ideas and products</p> <ul style="list-style-type: none"> identify the strengths and areas for development in their ideas and products consider the views of others, including intended users, to improve their work refer to their design criteria as they design and make use their design criteria to evaluate their completed products <p>Existing products</p> <ul style="list-style-type: none"> how well products have been designed how well products have been made why materials have been chosen what methods of construction have been used how well products work how well products achieve their purposes how well products meet user needs and wants pupils should also investigate and analyse: <ul style="list-style-type: none"> who designed and made the products where products were designed and made when products were designed and made whether products can be recycled or reused

Language

develop, design criteria, discussion, requirements, prototype	Think, design, sketch, annotate, label, product, , diagrams, accountability	Ideas, tools, materials, plan, equipment, accuracy, mechanical, electrical different techniques	Design brief, Product, analyse, compare, pros and cons, improvement
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Project: Packaging – shell structure (project on a page)	Project: pneumatic systems alternative project levers and linkages (project on a page)	Project: Design and make a cushion or purse.	Project 1: War time recipes Project 2: Honey oatcakes	Project: Christmas cards with light circuit
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Materials/Structures	Mechanisms	Textiles	Food and Nutrition	Electrical Systems
<ul style="list-style-type: none"> Measure carefully to avoid mistake attempt to make product strong continue working on product even if original didn't work *make a strong, stiff structure 	<ul style="list-style-type: none"> Select most appropriate tools / techniques explain alterations to product after checking it grow in confidence about trying new / different ideas. use levers and linkages to create movement use pneumatics to create movement 	<ul style="list-style-type: none"> Think about user when choosing textiles think about how to make product strong begin to devise a template explain how to join things in a different way understand that a simple fabric shape can be used to make a 3D textiles project 	<ul style="list-style-type: none"> Explain how to be safe/hygienic think about presenting product in interesting/ attractive ways understand ingredients can be fresh, pre-cooked or processed begin to understand about food being grown, reared or caught in the UK or wider world describe eat well plate and how a healthy diet=variety / balance of food and drinks explain importance of food and drink for active, healthy bodies prepare and cook some dishes safely and hygienically use some of the following techniques: peeling, chopping, slicing, grating, mixing, spreading, kneading and baking 	<ul style="list-style-type: none"> Use number of components in circuit. Program a computer to control product.

Language

Shell structure, three-dimensional (3-D) shape, net, cube, cuboid, prism, vertex, edge, face, length, width, breadth, capacity, marking out, scoring, shaping, tabs, adhesives, joining, assemble, accuracy, material, stiff, strong, reduce, reuse, recycle, corrugating, ribbing, laminating, font, lettering, text, graphics, decision.	Mechanism, lever, linkage, pivot, slot, bridge, guide system, input, process, output linear, rotary, oscillating, reciprocating.	Fabric, names of fabrics, fastening, compartment, zip, button, structure, finishing technique, strength, weakness, stiffening, templates, stitch, seam, seam allowance.	Name of products, names of equipment, utensils, techniques and ingredients texture, taste, sweet, sour, hot, spicy, appearance, smell, preference, greasy, moist, cook, fresh, savoury, hygienic, edible, grown, reared, caught, frozen, tinned, processed, seasonal, harvested healthy/varied diet.	Series circuit, fault, connection, toggle switch, push-to-make switch, push-to-break switch, battery, battery holder, bulb, bulb holder, wire, insulator, conductor, crocodile clip, control, program, system, input device, output device.
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Year Five DT Medium Term Plan

Research	Design	Make	Evaluate
<ul style="list-style-type: none"> • use internet and questionnaires for research and design ideas • take a user's view into account when designing • begin to consider needs/wants of individuals/groups when designing and ensure product is fit for purpose • create own design criteria • have a range of ideas • produce a logical, realistic plan and explain it to others. 	<p>Understanding contexts, users and purposes work confidently within a range of contexts, such as the home, school, leisure, culture, enterprise, industry and the wider environment</p> <ul style="list-style-type: none"> • describe the purpose of their products • indicate the design features of their products that will appeal to intended users • explain how particular parts of their products work <p>carry out research, using surveys, interviews, questionnaires and web-based resources</p> <ul style="list-style-type: none"> • identify the needs, wants, preferences and values of particular individuals and groups • <i>develop a simple design specification to guide their thinking</i> <p>Generating, developing, modelling and communicating ideas share and clarify ideas through discussion</p> <ul style="list-style-type: none"> • model their ideas using prototypes and pattern pieces • use annotated sketches, cross-sectional drawings and exploded diagrams to develop and communicate their ideas • use computer-aided design to develop and communicate their ideas • generate innovative ideas, drawing on research • <i>make design decisions, taking account of constraints such as time, resources and cost</i> 	<p>Planning select tools and equipment suitable for the task</p> <ul style="list-style-type: none"> • <i>explain their choice of tools and equipment in relation to the skills and techniques they will be using</i> • select materials and components suitable for the task • explain their choice of materials and components according to functional properties and aesthetic qualities <p><i>produce appropriate lists of tools, equipment and materials that they need</i></p> <ul style="list-style-type: none"> • <i>formulate step-by-step plans as a guide to making</i> <p>Practical skills and techniques follow procedures for safety and hygiene</p> <ul style="list-style-type: none"> • use a wider range of materials and components than KS1, including construction materials and kits, textiles, food ingredients, mechanical components and electrical components <p>accurately measure, mark out, cut and shape materials and components</p> <ul style="list-style-type: none"> • accurately assemble, join and combine materials and components • accurately apply a range of finishing techniques, including those from art and design • <i>use techniques that involve a number of steps</i> • demonstrate resourcefulness when tackling practical problems 	<p>Own ideas and products identify the strengths and areas for development in their ideas and products</p> <ul style="list-style-type: none"> • consider the views of others, including intended users, to improve their work <p>critically evaluate the quality of the design, manufacture and fitness for purpose of their products as they design and make</p> <ul style="list-style-type: none"> • <i>evaluate their ideas and products against their original design specification</i> <p>Existing products pupils should also investigate and analyse:</p> <ul style="list-style-type: none"> • how much products cost to make • how innovative products are • how sustainable the materials in products are • what impact products have beyond their intended purpose

Language

design criteria, discussion, requirements, develop	Think, design, sketch, annotate, label, product, diagrams, accountability	Ideas, tools, materials, plan, equipment, accuracy, mechanical, electrical different techniques.	Design brief, Product, analyse, compare, pros and cons, improvement
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Project: Bridges	Project: Pulleys and Gears (project on a page)	Project: Combining different fabric shapes.	Project 1: Bread Project 2: Salsa	Project: To be decided
Materials/Structures	Mechanisms	Textiles	Food and Nutrition	Electrical Systems
<ul style="list-style-type: none"> • Select materials carefully, considering intended use of product and appearance • explain how product meets design criteria • measure accurately enough to ensure precision • ensure product is strong and fit for purpose • begin to reinforce and strengthen a 3D frame 	<ul style="list-style-type: none"> • Refine product after testing • grow in confidence about trying new / different ideas • begin to use cams, pulleys or gears to create movement 	<ul style="list-style-type: none"> • Think about user and aesthetics when choosing textiles • use own template • think about how to make product strong and look better • think of a range of ways to join things • begin to understand that a single 3D textiles project can be made from a combination of fabric shapes. 	<ul style="list-style-type: none"> • Explain how to be safe / hygienic and follow own guidelines • present product well - interesting, attractive, fit for purpose • begin to understand seasonality of foods • understand food can be grown, reared or caught in the UK and the wider world • describe how recipes can be adapted to change appearance, taste, texture, aroma • explain how there are different substances in food / drink needed for health • prepare and cook some savoury dishes safely and hygienically including, where appropriate, use of heat source • use range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking. 	<ul style="list-style-type: none"> • Incorporate switch into product • *confidently use number of components in circuit • *begin to be able to program a computer to monitor changes in environment and control product

Language

Frame structure, stiffen, strengthen, reinforce, triangulation, stability, shape, join, temporary, permanent	pulley, drive belt, gear, rotation, spindle, driver, follower, ratio, transmit, axle, motor, circuit, switch, circuit diagram, annotated drawings, exploded diagrams, mechanical system, electrical system, input, process, output	Seam, seam allowance, wadding, reinforce, right side, wrong side, hem, template, pattern pieces, name of textiles and fastenings used, pins, needles, thread, pinking shears, fastenings,	Ingredients, yeast, dough, bran, flour, wholemeal, unleavened, baking soda, spice, herbs fat, sugar, carbohydrate, protein, vitamins, nutrients, nutrition, healthy, varied, gluten, dairy, allergy, intolerance, savoury, source, seasonality utensils, combine, fold, knead, stir, pour, mix, rubbing in, whisk, beat, roll out, shape, sprinkle, crumble	Reed switch, toggle switch, push-to-make switch, push-to-break switch, light dependent resistor (LDR), tilt switch, light emitting diode (LED), bulb, bulb holder, battery, battery holder, USB cable, wire, insulator, conductor, crocodile clip control, program, system, input device, output device, series circuit, parallel circuit
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Year Six DT Medium Term Plan

Research	Design	Make	Evaluate
<ul style="list-style-type: none"> draw on market research to inform design use research of user's individual needs, wants, requirements for design identify features of design that will appeal to the intended user create own design criteria and specification come up with innovative design ideas follow and refine a logical plan. 	<p>Understanding contexts, users and purposes work confidently within a range of contexts, such as the home, school, leisure, culture, enterprise, industry and the wider environment</p> <ul style="list-style-type: none"> describe the purpose of their products indicate the design features of their products that will appeal to intended users explain how particular parts of their products work <p>carry out research, using surveys, interviews, questionnaires and web-based resources</p> <ul style="list-style-type: none"> identify the needs, wants, preferences and values of particular individuals and groups develop a simple design specification to guide their thinking <p>Generating, developing, modelling and communicating ideas share and clarify ideas through discussion</p> <ul style="list-style-type: none"> model their ideas using prototypes and pattern pieces use annotated sketches, cross-sectional drawings and exploded diagrams to develop and communicate their ideas use computer-aided design to develop and communicate their ideas <p>generate innovative ideas, drawing on research</p> <ul style="list-style-type: none"> make design decisions, taking account of constraints such as time, resources and cost 	<p>Planning select tools and equipment suitable for the task</p> <ul style="list-style-type: none"> explain their choice of tools and equipment in relation to the skills and techniques they will be using select materials and components suitable for the task explain their choice of materials and components according to functional properties and aesthetic qualities <p>produce appropriate lists of tools, equipment and materials that they need</p> <ul style="list-style-type: none"> formulate step-by-step plans as a guide to making <p>Practical skills and techniques follow procedures for safety and hygiene</p> <ul style="list-style-type: none"> use a wider range of materials and components than KS1, including construction materials and kits, textiles, food ingredients, mechanical components and electrical components accurately measure, mark out, cut and shape materials and components accurately assemble, join and combine materials and components accurately apply a range of finishing techniques, including those from art and design use techniques that involve a number of steps demonstrate resourcefulness when tackling practical problems 	<p>Own ideas and products</p> <ul style="list-style-type: none"> identify the strengths and areas for development in their ideas and products consider the views of others, including intended users, to improve their work critically evaluate the quality of the design, manufacture and fitness for purpose of their products as they design and make evaluate their ideas and products against their original design specification <p>Existing products pupils should also investigate and analyse:</p> <ul style="list-style-type: none"> how much products cost to make how innovative products are how sustainable the materials in products are what impact products have beyond their intended purpose

Language

design criteria, discussion, requirements, develop	Think, design, sketch, annotate, label, product, diagrams, accountability	Ideas, tools, materials, plan, equipment, accuracy, mechanical, electrical different techniques.	Design brief, Product, analyse, compare, pros and cons, improvement
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Project: Bridges	Project: Pulleys and Gears (project on a page)	Project: Combining different fabric shapes.	project 1: Bread Project 2: Salsa	Project: To be decided
Materials/Structures	Mechanisms	Textiles	Food and Nutrition	Electrical Systems
<ul style="list-style-type: none"> select materials carefully, considering intended use of the product, the aesthetics and functionality. explain how product meets design criteria reinforce and strengthen a 3D frame 	<ul style="list-style-type: none"> refine product after testing, considering aesthetics, functionality and purpose incorporate hydraulics and pneumatics be confident to try new / different ideas use cams, pulleys and gears to create movement 	<ul style="list-style-type: none"> think about user's wants/needs and aesthetics when choosing textiles make product attractive and strong make a prototype use a range of joining techniques think about how product might be sold think carefully about what would improve product understand that a single 3D textiles project can be made from a combination of fabric shapes. 	<ul style="list-style-type: none"> understand a recipe can be adapted by adding / substituting ingredients explain seasonality of foods learn about food processing methods name some types of food that are grown, reared or caught in the UK or wider world adapt recipes to change appearance, taste, texture or aroma. describe some of the different substances in food and drink, and how they can affect health prepare and cook a variety of savoury dishes safely and hygienically including, where appropriate, the use of heat source. *use a range of techniques confidently such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking. 	<ul style="list-style-type: none"> use different types of circuit in product think of ways in which adding a circuit would improve product program a computer to monitor changes in environment and control product

Language

Frame structure, stiffen, strengthen, reinforce, triangulation, stability, shape, join, temporary, permanent	Pulley, drive belt, gear, rotation, spindle, driver, follower, ratio, transmit, axle, motor, circuit, switch, circuit diagram, annotated drawings, exploded diagrams, mechanical system, electrical system, input, process, output	Seam, seam allowance, wadding, reinforce, right side, wrong side, hem, template, pattern pieces, name of textiles and fastenings used, pins, needles, thread, pinking shears, fastenings,	Ingredients, yeast, dough, bran, flour, wholemeal, unleavened, baking soda, spice, herbs fat, sugar, carbohydrate, protein, vitamins, nutrients, nutrition, healthy, varied, gluten, dairy, allergy, intolerance, savoury, source, seasonality utensils, combine, fold, knead, stir, pour, mix, rubbing in, whisk, beat, roll out, shape, sprinkle, crumble	Reed switch, toggle switch, push-to-make switch, push-to-break switch, light dependent resistor (LDR), tilt switch, light emitting diode (LED), bulb, bulb holder, battery, battery holder, USB cable, wire, insulator, conductor, crocodile clip control, program, system, input device, output device, series circuit, parallel circuit
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